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## IN THE UNITED STATES DISTRICT COURT FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

AMANDA BARGE and

ARTHUR BARGE,

**Plaintiffs** 

v.

CASE NUMBER: 1:00-CV-1881

DAVID J. SALINGER, M.D.;

WILLIAM YING, Ph.D.;

Judge Rambo

KEYSTONE ONCOLOGY, LLC d/b/a

HERITAGE HILLS ONCOLOGY CTR.:

COMPREHENSIVE PHYSICS AND

REGULATORY SERVICE, LTD. and

EQUIMED, INCORPORATED,

Defendants

JURY TRIAL DEMANDED

# PRETRIAL MEMORANDUM OF DEFENDANTS WILLIAM YING, Ph.D. AND COMPREHENSIVE PHYSICS AND REGULATORY SERVICES

Date conference was held by counsel:

February 12, 2003.

#### A. Brief State as to Federal Court Jurisdiction

Jurisdiction in this matter is premised upon diversity of citizenship, pursuant to 28 U.S.C. §1332(a).

#### B. Summary of Statement of Facts and Contentions as to Liability

The above-captioned matter is a medical malpractice action which seeks recovery of damages for the Defendants' alleged negligence during the course of superficial radiation

treatment being administered to Plaintiff Amanda Barge. Defendants Ying and Comprehensive Physics and Regulatory Services (CPRS) deny any liability in this matter.

The Plaintiff, Amanda Barge, was diagnosed with recurrent basal cell cancer of the upper lip in the early part of 1999. It was recommended that she either undergo surgical removal of the cancer or that she undergo superficial radiation treatment of the affected area. Mrs. Barge elected to undergo the radiation therapy. This therapy was scheduled to be performed at the Heritage Hills Cancer Center, under the supervision of Dr. David Salinger. Superficial radiation treatment was a new therapy option which Dr. Salinger wanted to offer to his patients.

Because superficial radiation treatment was a therapy which was new to the Heritage Hills Cancer Center, it was necessary to obtain a superficial treatment x-ray machine. This was obtained and installed in early April 1999. Dr. William Ying, an employee of CPRS, was the radiation physicist who tested the equipment to determine the nature of the radiation output. This was achieved by referral of the x-ray tube to the MD Anderson Cancer Center for calibration. After the x-ray tube was returned, it was installed in the superficial treatment x-ray machine and the outputs were measured. This resulted in the development of output values and times to be utilized by the physician in the creation of his radiation treatment plan.

Mrs. Barge was one of the first patients scheduled for superficial radiation treatment at the hands of Dr. Salinger. This treatment began on May 24, 1999. The treatments proceeded until June 8, 1999, under the direction of Dr. Salinger and his staff. Significantly, Dr. Ying was not involved in the administration of treatment. As a radiation physicist, he is not a medical doctor and, accordingly, is not involved in actual treatment and therefore has absolutely no contact with the patients.

On June 8, 1999, Dr. Ying was advised by Dr. Salinger that Mrs. Barge was showing the signs of an inappropriate reaction to the radiation treatments. Upon learning of the concern about the treatment, Dr. Ying immediately advised Dr. Salinger to cease use of the superficial treatment machine until it could be checked for a malfunction. Examination of the equipment revealed that the machine had increased its output to a significantly higher output than the output at the time of the initial calibration.

Dr. Salinger continued to treat the Mrs. Barge, following the discontinuation of the radiation treatments. After several weeks of topical treatments, Mrs. Barge sought consultation with other physicians. These physicians have assumed responsibility for her care, which has included plastic surgical revision of the blistering of the skin. Significantly, there has been no return of the basal cell carcinoma.

#### C. Comprehensive Statement of Material Facts

- 1. Amanda Barge was a 45-year-old woman, who at the time of treatment was a housewife and mother, as well as a bank teller, working full-time at a bank in Westminster, Maryland.
- 2. In 1999, Mrs. Barge was referred to the Defendant Salinger for radiation treatment of a basal cell anomaly of the right upper lip.
- 3. Mrs. Barge was recommended to have radiation therapy for this condition as compared to surgical excision, as the cosmetic result was thought to be superior with the radiation therapy.

- 5. Defendant Salinger recommended 4-5 weeks of treatment, five days a week, in Littlestown, Pennsylvania, at the Defendant treatment center.
- 6. From the time of the very first treatment, Mrs. Barge made complaints to Defendant Salinger and other employees of the Heritage Hills Cancer Center regarding the pain and burning to the skin, as well as complaints of swelling and induration.
- 7. Mrs. Barge made repeated complaints with regard to these symptoms every time she received radiation treatment by Defendants Salinger and Heritage Hills Cancer Center.
- 8. At no time during any of the treatments rendered to the Plaintiff over the course of approximately 21/2 weeks, did Defendant Salinger assess the treatment unit to determine wither it was functioning properly.
- 9. At no time during any of the treatments rendered to the Plaintiff over the course of approximately 21/2 weeks, did Defendant Ying assess the treatment unit to determine whether is was functioning properly.
- 10. Mrs. Barge's radiation treatment was discontinued because Mrs. Barge refused to have any further treatments.
- 11. After Mrs. Barge refused to have any more treatments, it was at this time, for the first time, that Defendant Salinger checked to determine whether the radiation dosages administered to Mrs. Barge were correct.

- 12. The treatment unit utilized by the Defendants was a used and refurbished machine that was installed within one (1) month prior to the Plaintiff's first treatment with such machine.
- The Plaintiff, Amanda Barge, was one of the first two patients to be administered radiation therapy with this used/refurbished superficial x-ray unit.
- 14. After Mrs. Barge refused further treatment because of the pain she was in, the Defendants determined that the radiation being emitted from the treatment unit was five (5) times more than that which was originally prescribed.
- 15. Mrs. Barge treated conservatively for a period of 6-8 weeks following the discovery of her radiation burn injury, which was not successful.
- 16. Mrs. Barge sustained full thickness, transmural burns to the area of radiation treatment because of overexposure to radiation.
- 17. The Plaintiff, Amanda Barge, underwent a total to twelve (12) surgical procedures by the physicians at the Johns Hopkins Hospital, division of Plastic/Burn surgery, in treatment of the radiation burn injury sustained by Mrs. Barge.
- 18. All of the surgeries performed upon Mrs. Barge were necessitated a consequence of the radiation burn injury sustained by her during the course of radiation treatment provided by the Defendants.
- 19. Mrs. Barge suffers with depressive an anxiety disorders, as diagnosed by Stephen Siebert, M.D.
- 20. Mrs. Barge suffers with depressive and anxiety disorders, which Dr. Siebert related to the radiation burn injury and subsequent surgical procedures that Mrs. Barge underwent.

- Arthur and Amanda Barge were married in 1974, living in Carroll County,
   Maryland, and raising their two daughters.
- 22. Mr. and Mrs. Barge have never been separated during the course of their marriage.
- 23. Mrs. Barge was required to be absent from her employment for approximately 650 hours as a result of the need for medical attention for the radiation burn injury, sustained through radiation treatment rendered by the Defendants.
- 24. Defendant Ying calibrated the used/refurbished treatment unit.
- 25. Defendant Ying certified the used/refurbished treatment unit for use on Amanda Barge.
- 26. Dr. Ying did not perform any daily periodic constancy checks for radiation output, from the time of Amanda Barge's initial treatment through the time that Mrs. Barge refused any further treatment.
- 27. Defendant Ying provided Defendant Salinger with blank dose calculation sheets for use by Defendant Salinger.

#### D. <u>Brief Description of Damages</u>

- (1) (6) See Plaintiffs' Memorandum. Defendants Ying and CPRS contest any responsibility for the damages alleged by the Plaintiffs.
- E. Names and Addresses of Witnesses

William Ying, Ph.D. Harrisburg Cancer Center 775 S. Arlington Ave. Harrisburg, PA 17109

David Salinger, M.D. 500 University Drive Hershey, PA

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Amanda Barge 3100 Coachman Way Manchester, MD

Arthur Barge 3100 Coachman Way Manchester, MD

Abdurrahaman Unal, M.D. 775 S. Arlington Ave. Harrisburg, PA

William Walker, Ph.D. Comprehensive Physics and Regulatory Services Seven Points, MD

Dr. Donald Velkley See curriculum vitae attached hereto as **Exhibit "A"** 

#### F. Summary of Testimony of Each Expert

See report of Richard Velkley attached hereto as Exhibit "B"

#### G. Special Comment about Pleadings and Discovery

No outstanding issues exist at this time.

#### H. Summary of Legal Issues Involved and Legal Authorities Relied Upon

#### **Liability**

No unusual liability issues are anticipated. This matter is a medical malpractice action which presents no unique or unusual legal issues at variance with the requirements of Pennsylvania law.

#### Damages

Plaintiffs claim damages for medical bills. Plaintiffs propose introduction of medical bills of just below \$70,000.00. Such evidence is improper under Pennsylvania law.

Instead, the Plaintiffs are limited to introduction of medical bills in an amount equal only to the amount which was reasonable and necessary for the treatments provided.

This amount is equal to the amount which was actually accepted as payment in full for the services rendered. In other words a plaintiff is limited to recovery of only that amount which was reimbursed by health insurance and accepted as payment in full by the healthcare providers. See Moorehead v. Crozer Chester Medical Center, 765 A.2d 786 (Pa., 2001).

#### I. Stipulations Desired

It is requested that the parties stipulate to the authenticity of the medical records to avoid the necessity of calling records custodians at the time of trial.

#### J. Estimated Number of Trial Days

It is anticipated that trial will take approximately 5 days.

#### K. Any Other Matter Pertinent to the Case to be Tried

No other matters are anticipated at this time.

#### L. Prenumbered Schedule of Exhibits

See joint exhibits submitted by counsel for the Plaintiffs. These exhibits comprise the collected medical records and the records of CPRS.

#### M. Special Verdict Questions

Counsel anticipates use of a standard verdict form.

#### N. Local Rule 16.2 Certification

Representatives of the insurance carrier for Dr. Ying and CPRS have been made aware of the date and time of the Pretrial Conference.

#### O. Local Rule 30.10 Certification

No videotape depositions requiring resolution of objections have been taken at this time.

Respectfully submitted,

FARRELL & RICCI, P.C.

Date: 2/19/03

Joseph A. Ricci, Esquire Attorney I.D. No. 49803 4423 North Front Street Harrisburg, PA 17110

(717) 230-9201

Counsel for Defendants William Ying, Ph.D. and Comprehensive Physics and Regulatory Services, Ltd.

#### **CURRICULUM VITAE**

Name

Donald Edward Velkley, Ph.D.

Date of Birth

March 7, 1941

Social Security Number

405-56-6699

Home Address

300 Reist Road Lebanon, PA 17042

Home Telephone Home Fax Cell Phone (717) 272-3784 (717) 272-5317 (717) 926-3306

**Business Address** 

Pennsylvania Radiation Physics Associates, Ltd.

P. O. Box 164

Hershey, PA 17033

Business Telephone

(717) 272-3784

Wife's Name

Kitty Velkley

#### **EDUCATION**

B.S. - Physics

1963 University of Kentucky

Lexington, KY

Ph.D.- Nuclear Physics

1968 University of Kentucky

Lexington, KY

Certificates

1974 The University of Texas Health Science Ctr. At Houston

1. External Beam, Interstitial and Intracavitary Dosimetry

Principles.

2. External Beam, Interstitial and Intracavitary Dosimetry-

Manual and Computer Methods of Calculation.

1976 Diplomat of American Board of Radiology - Therapeutic

Radiological Physics.

1990 Diplomat of American Board of Medical Physics -

Radiation Oncology Physics



1959 - 1963 Ashland Oil Scholar, University of Kentucky

1960 Keys Honor Society, University of Kentucky

1960 University of Kentucky Academic Achievent Award

1961 Chemical Rubber Co. Physics Award - U. of Kentucky

1961 - 1963 N.S.F. Undergraduate Research Fellow

1963 - 1967 Graduate Research Fellow - U. of Kentucky

#### PROFESSIONAL SOCIETIES

American Association of Physicists in Medicine

American Society of Therapeutic Radiology and Oncology

Health Physics Society

American College of Medical Physics

Central Pennsylvania Medical Physics Group

#### PROFESSIONAL EXPERIENCE

1976 – Present Founder and President

Pennsylvania Radiation Physics Associates, Ltd.

P. O. Box 164

Hershey, PA 17033

1979 - Present Consultant in Physics

Lancaster General Hospital, Lancaster, PA

2001 – Present Consultant in Physics

Susquehanna Valley Cancer Treatment Center

Selinsgrove, PA

2000 – 2001 Consultant in Physics

**Ephrata Cancer Center** 

The Ephrata Hospital, Ephrata, PA

1979 - 1999	Consultant in Physics Division of Radiation Oncology Department of Radiology The Carlisle Hospital, Carlisle, PA
.1982 - 2000	Associate Professor Chief, Division of Medical Physics Department of Radiology The M.S. Hershey Medical Center, Hershey, PA
1977-1982	Assistant Professor Chief, Division of Medical Physics Department of Radiology The M.S. Hershey Medical Center, Hershey, PA
1976-1977	Assistant Professor Division of Medical Physics Department of Radiology The M.S. Hershey Medical Center, Hershey, PA
1979-1993	Consultant in Physics Department of Nuclear Medicine The York Hospital, York, PA
1977-1993	Consultant in Physics Divisions of Diagnostic and Therapeutic Radiology The York Hospital, York, PA
1976-1989	Consultant in Physics Department of Radiology Harrisburg Hospital, Harrisburg, PA
1974-1976	Instructor Mallincrodt Institute of Radiology Washington University School of Medicine, St. Louis, MO
1974-1976	Director Physics Consultation and Treatment Planning Center Mallincrodt Institute of Radiology Washington University School of Medicine, St. Louis, MO
1973-1974	Research Associate  Mallincrodt Institute of Radiology  Washington University School of Medicine, St. Louis, MO

1971-1973 Nuclear Physicist

The Adena Corporation and Aerospace Research Laboratories

Wright Patterson Air Force Base, Dayton, OH

1969-1971 Research Associate

Department of Physics

Case-Western Reserve University, Cleveland, OH

1967-1969 Research Associate

T.W. Bonner Nuclear Laboratory

Department of Physics

Rice University, Houston, TX

#### **PUBLICATIONS**

- 1. Barrows AW, Lamb RC, Velkley DE and McEllistrem MT: Levels of 51V and 55MN via (n,n¹y) reactions. Nuclear Medicine A107:153-169, 1968.
- 2. Chung KC, Velkley DE and McEllistrem MT: <sup>27</sup>Al (n,n¹y) reactions and the 3002 keV level. Nuclear Physics A115:476-480, 1968.
- 3. Velkley DE, Chung KS, Mittler A, Bradenberger JD and McEllistrem MT: Levels of 69,71Ga via (n,nly) reactions. <u>Physical Review</u> 179:1090-1099, 1969.
- Mutchler GS, Rendic D, Velkley DE, Sweeney WE Jr. and Phillips GC: The (d,n) reaction on 1p shell nuclei at E<sub>d</sub> = 11.8 MeV. <u>Nuclear Physics</u> A172:469-488, 1971.
- 5. Rendic D, Mutchler GS, Emerson ST, Buchanan J, Velkley DE, Sandler J, Otte VA, Bretscher MM, Bonner BE and Phillips GC: Neutron time of flight facility at Rice University. <u>Nuclear Instruments and Methods</u> 99:189-203, 1972.
- 6. Anderson BD, Velkley DE and Willard HB: 160 (d,n) polarization and cross sections from 3 to 4 MeV. Physical Review 6C:1513-1522, 1972.
- 7. Velkley DE, Glasgow DW, Brandenberger JD, McEllistrem MT, Manthuruthil JC and Poirier CP: The scattering of 7 to 9 MeV neutrons by carbon. <u>Physical Review</u> 7C:1736-1742, 1973.
- 8. Glasgow DW, Velkley DE, Brandenberger JD and McEllistrem MT, Hennecke JH and Breitenbecher DB: Shielding for fast neutron scattering experiments of high sensitivity. Nuclear Instruments and Methods 114:521-531, 1974.
- 9. Glasgow DW, Velkley DE, Brandenberger JD, McEllistrem MT: Pulse-shape discrimination for wide dynamic range neutron scattering experiments. <u>Nuclear Instruments and Methods</u> 114:535-539, 1974.
- 10. Glasgow DW, Velkley DE, Brandenberger JD, McEllistrem MT, Harris GI, Hennecke HJ, Breitenbecher DB, Poirier DC, Manthuruthil JS, Anderson WA, Hyder AK Jr. and Centala MD: A high precision neutron time-of-flight facility. Nuclear Instruments and Methods 114:541-556, 1974.
- 11. Velkley DE, Glasgow DW, Brandenberger JD, McEllistrem MT, Manthuruthil JS and Poirier CP: Scattering of 9.0 MeV neutrons by Al, Si, Fe, Ni, and Co. <u>Physical Review</u> C9:2181-2192, 1974.

- 12. Velkley DE, Manson DJ, Purdy JA and Oliver GD Jr: The build-up region of megavoltage photon radiation sources. <u>Medical Physics</u> 2:14-19, 1975.
- 13. Manson DJ, Velkley De, Purdy JA and Oliver GD Jr: Surface dose from build-up curves obtained with an extrapolation chamber. <u>Radiology</u> 115:473-474, 1975.
- 14. Velkley DE, Glasgow DE, Brandenberger JD and McEllistrem MT: A detailed comparison of analytic and monte carol methods for correcting neutron scattering measurements for finite sample effects. Nuclear Instruments and Methods 129:231-239, 1975.
- 15. Velkley DE: Co60 therapy machine malfunctions. Medical Physics 2:126, 1975.
- Velkley DE, Vorlage AE, Wetzel JW and Oliver GD Jr: Stereo-photogrammetry for determining patient contours. <u>Physics in Canada</u> 32:4-6, 1976.
- 17. Purdy JA, Velkley DE and Ter-Pogossian M: Computer assisted tomography in radiation therapy treatment-effect of inhomogeneities. <u>Physics in Canada</u> 32:26.1, 1976.
- 18. Velkley DE, Oliver GD Jr., Wetzel JW and Vorlage AE: Stereo-photogrammetric determination of patient surface geometry. <u>Medical Imaginig</u> 1:46, 1976.
- 19. Marks JE, Oliver GD Jr. and Velkley DE: Method for increasing the linear activity of 192Ir sources for interstitial implantation. Radiology 128:511-512, 1978.
- 20. Velkley DE and Oliver GD Jr,: Stereo-photogrammetry for the determination of patient surface geometry. <u>Medical Physics</u> 6:100-104, 1979.
- 21. Chung CK, Stryker JA, Abt AB, Conner G and Velkley DE: Tumor sterilization with high-dose preoperative radiation in advanced laryngeal cancer. <u>Radiology</u> 132:171-174, 1979.
- 22. Miller KL, Bott SM, Velkley DE and Cunningham DE: Review of contamination and exposure hazards associated with therapeutic uses of radioiodine. <u>Journal of Nuclear Medicine Technology</u> 7:163-166, 1979.
- 23. Velkley DE and Purdy JA: Variation in depth of maximum dose of megavoltage photon beams. Applied Radiology 9:40-44, 1980.
- 24. Keys DJ, Purdy JA, Israel MH and Velkley DE: Thin-walled parallel plate ionization chamber for use with photon and electron beam dosimetry. Medical Physics 7:163-164, 1980.
- 25. Stryker JA, Clement JA, Velkley DE and Gruver CA: Radiation Therapy Technology Examination Review Book. Medical Examination Publishing Co., Garden CIty, NY 11530, 1980.
- 26. Stryker JA and Velkley DE: Weight loss during pelvic irradiation: Cobalt-60 vs 10 MV. Strahlungtherapie 156:754-758, 1980.
- 27. Cunningham DE, Frey RA and Velkley DE: An inexpensive variable-frequency microwave system for hyperthermia. <u>Medical Physics</u> 7:712-714, 1980.

- Velkley DE, Cunningham DE and Strockbine MF: Evaluation of computed tomography assisted and transit dosimetry treatment planning with thermoluminescent dosimetry measurements. <u>International Journal of Radiation Oncology Biology and Physics</u> 6:1739-1744, 1980.
- 29. Cunningham DE, Stryker JA, Velkley DE and Chung CK: Intracavitary dosimetry: a comparison of MGHR prescription to doses at points A and B in cervical cancer. International Journal of Radiation Oncology Biology and Physics 7:121-123, 1981.
- 30. Cunningham DE, Stryker JA, Velkley DE and Chung CK: Routine clinical estimation of rectal, rectosigmoidal and bladder doses from intracavitary brachytherapy in the treatment of carcinoma of the cervix. <u>International Journal of Radiation Oncology Biology and Physics</u> 7:653-660, 1981.
- 31. Cunningham DE and Velkley DE: Monthly calibration verification identifies faulty cobalt-60 shutter mechanism. <u>Medical Physics</u> 8:523, 1981.
- 32. Velkley DE: A note on the formalism for irregular field calculations. <u>Medical Physics</u> 8:725, 1981.
- 33. Cunningham DE, Sharkey FA, Frey RA, Stryker JA and Velkley DE: Microwave hyperthermia and electron beam therapy of superifical tumors of human origin in the nude mouse. <u>Journal of National Cancer Institute Monograph</u> 61:385, 1981.
- 34. Cunningham DE, Frey RA and Velkley DE: Microwave hyperthermia potentiates radiation in the treatment of radioresistant tumor of human origin in the nude mouse. <u>Digest of the 1981 Microwave Power Symposium</u>, June, 1981.
- 35. Stryker JA, Velkley DE, Cunningham DE and Craycraft GH: A prospective study demonstrating the value of computerized tomography as a supplement to simulation in radiotherapy treatment planning. <u>AAMD Journal IXI:5</u>, 1984.
- 36. Stryker JA, Velkley DE and Sucec CA: <u>Radiation Therapy Examination Review Book</u>, Second Edition. Medical Examination Publishing Co., Garden City, NY 11530, 1984.
- 37. Husseinzadeh N, Nahhas WA, Velkley DE, Whitney CW and Mortel R: The preservation of ovarian function in young women undergoing pelvic radiation therapy. Gynecologic Oucology 18:373-379, 1984.
- 38. Stryker JA, Bartholomew M, Velkley DE, Cunningham DE, Mortel R, Craycraft GH, Shafer J: Bladder and rectal complications following radiotherapy for cervix cancer.

  <u>Gynecologic Oncology</u> 29:1-11, 1988.
- 39. Stryker JA, Robins DB, Velkley DE: The relative radiosensitivity of the urinary bladder in cancer therapy. Advances in Radiation Biology 14:1-22, 1990.
- 40. Stryker JA, Sommerville K, Perez R and Velkley DE: Sacral plexus injury after radiotherapy for carcinoma of cervix. <u>Cancer</u> 66:1488-1492, 1990.

- 41. Stryker JA, Podczaski E, Kaminski P and Velkley DE: Adjuvant external beam therapy for pathologic stage I and occult stage II endometrial carcinoma. <u>Cancer</u> 67:2872-2879, 1991.
- 42. Velkley DE: The Management of Radiation Therapy Patients. <u>Handbook of Management of Radiation Protection Program</u>, Second Edition, ed. by KL Miller. CRC Press, Boca Raton, Florida, 1992.
- 43. Kasat R, Velkley DE, Singapuri, K and Stryker JA: Evaluation of Simulator Accuracy with Treatment Planning CT Scans. <u>Administrational Radiology</u>, 61-69, 1992.
- 44. Robertson JS, Frauenhoffer EE, Stryker JA, Schaitkin B, Velkley DE, McGinn JD. Osteoradionecrosis of the Hyoid Induced by Combined Modality Therapy for Laryngeal Carcinoma. <u>ENT Journal</u> 74;578-581, August 1995.

#### PUBLISHED ABSTRACTS

- 1. Velkley DE, McEllistrem MT and Brandenberger JD: Structure in the <sup>19</sup>F (n,n<sup>1</sup>y) reaction at low energies. <u>Bulletin of American Physical Society</u> 11:832, 1966.
- 2. Velkley DE, McEllistrem MT and Brandenberger JD: Levels of 69,71Ga via (n,n1y) reactions. <u>Bulletin of American Physical Society</u> 12:492, 1967.
- 3. Chung KC, Velkley DE, Brandenberger JD and McEllistrem MT: <sup>27</sup>(Al(n,n<sup>1</sup>y) reactions and the 3002 keV level. <u>Bulletin of American Physical Society</u> 12:1187, 1967.
- 4. Velkley DE, Mutschler GW, Rendic D, Sandler J and Phillips GC: 12,13C(d,n) reactions at E<sub>d</sub>=11.8 MeV. <u>Bulletin of American Physical Society</u> 14:1200, 1967.
- 5. Velkley DE, Chung KS, Mittler A, Brandenberger JD and McEllistrem MT: Levels of 69,71Ga via (n,n1y) reactions. <u>Bulletin of American Physical Society</u> 12:1187, 1967.
- 6. Anderson BD, Velkley DE and Willard HB: Polarization of Neutrons from the <sup>16</sup>O (d,n) reactions. <u>Bulletin of American Physical Society</u> 16:36, 1971.
- 7. Velkley DE, Glasgow DW, Poirier CP and Manthuruthil JC: Elastic scattering of neutrons by C, Al, Si, Co and Y at 9.0 MeV. <u>Bulletin of American Physical Society</u> 17:554, 1972.
- 8. Velkley DE, Glasgow DW, Brandenberger JD, McEllistrem MT: Isospin dependence of the optical potential. <u>Bulletin of American Physical Society</u> 18:547, 1973.
- 9. Purdy JA, Zivnuska FR, Velkley DE and Keys D: Percent depth dose studies on the clinac 35 linear accelerator. Medical Physics 2:165, 1975.
- 10. Velkley DE and Purdy JA: Depth of maximum dose for megavoltage photon beams. Medical Physics 2:166, 1975.
- 11. Velkley DE, Oliver GD Jr., Grossman CB, Weidner WA and Fink HE: Practical patient of dosimetry for CT head scanning. American Society of Neuro-radiology 15:81, 1977.

- 12. Cunningham DE, Velkley DE and Miller KL: The unique safety aspects of I-125 seed therapy. Health Physics Society Annual Meeting 7, 1979.
- 13. Cunningham DE, Velkley DE, Stryker JA, Chung CK and Miller KL: An evaluation of rectal doses from vaginal or uterine applications of Cs-137. <u>Health Physics Society Annual Meeting</u> 59, 1979.
- 14. Velkley DE, Cunningham DE and Strockbine MF: Evaluation of CT assisted and transit dosimetry treatment planning with TLD measurements. <u>Digest of V International Conference on Medical Physics</u> 9.3, 1979.
- 15. Velkley DE, Cunningham DE and Strockbine MF: Evaluation of CT assisted and transit dosimetry treatment planning with TLD measurements. <u>International Journal of Radiation</u> Oncology Biology and Physics 5 supp 2:73, 1979.
- 16. Cunningham DE, Stryker JA, Velkley DE and Chung CK: Comparative analysis of dosage points in carcinoma of the cervix. Medical Physics 7:437, 1980.
- 17. Velkley DE and Cunningham Dis: Anomalous surface dose from gyn colpostats. Medical Physics 8:571, 1981.
- 18. Cunningham DE, Velkley DE and Crayfract GH: The effect of cast material on penetration and surface dose in the treatment of bone metastases. <u>Medical Physics</u> 8:574, 1981.

## EXHIBITS, WORKSHOPS AND PRESENTATIONS

- 1. Velkley DE: The neutron time-of-flight facility at the Rice Tandem Accelerator. Presented at the National Cross Section Advisory Committee Meeting, Houston, Texas, September 6, 1969.
- 2. Purdy JA, Oliver GD Jr., Velkley DE, Powers WE, Perez CA and ZIvnuska FR: The clinac 35 linear accelerator at Mallinckrodt Institute of Radiology. Presented at the Annual Meeting of ASTR, Key Biscayne, Florida, October 30, 1974.
- 3. Velkley DE, Oliver GD Jr. and Powers WE: Contouring techniques for radiation therapy treatment planning. Presented at the Annual Meeting of the ASTR, San Francisco, California, October 8, 1975.
- 4. Marks JE, Oliver GD Jr., Lee F, Velkley DE and Fotenos H: Afterloading and mold techniques in the treatment of head and neck cancer. Presented at the Annual Meeting of the American Society of Therapeutic Radiologists, San Francisco, California, October 8, 1975.
- 5. Miller KL, Velkley DE and Cunningham DE: Review of the contamination and exposure hazards associated with therapeutic uses of radioiodine. Presented at World Federation of Nuclear Medicine and Biology Second International Congress, Washington, D.C., September 17-21, 1978.

- Velkley DE, Cunningham DE and Stryker JA: Quality control and performance characteristics of an 18 MV linear accelerator. Presented at the Keystone Area Society of Radiation Oncologists Meeting, Valley Forge, Pennsylvania, October 7, 1978.
- Velkley DE, Cunningham DE and Miller KL: A review of the contamination and exposure hazards associated with therapeutic uses of radioiodine. Presented at the Annual Meeting of Pennsylvania Radiological Society, Lancaster, Pennsylvania, May 18-20, 1979.
- Stryker JA, Cunningham DE, Chung CK, Clement JA and Velkley DE: Reduction of small bowel dose during treatment of rectal carcinoma. Presented at the Annual Meeting of American Society of Therapeutic Radiologists, New Orleans, Louisiana, October 23-27, 1979.
- Cunningham DE, Frey RA and Velkley DE: A variable frequency microwave system for hyperthermia. Presented at the Annual Meeting of ACEMB, Washington D.C., September 30 - October 3, 1980.
- Cunningham DE, Velkley DE, Chung CK and Stryker JA: Postoperative radiotherapy of rectal carcinoma. Presented at the Annual Meeting of Pennsylvania Radiological Society, Gettysburg, Pennsylvania, May 15-18, 1980.
- Velkley DE, Cunningham DE, Chung CK and Stryker JA: Review of Cs and Ra comparative dosimetry in gynecological implants. Presented at the Annual Meeting of American Society of Therapeutic Radiologists, Dallas, Texas, October 21-25, 1980.
- Velkley DE: Current applications of physics in medicine. Presented at Physics Colloquium at Franklin and Marshall College, Lancaster, Pennsylvania, November 6, 1980.
- Velkley DE: The risks of radiation exposure is it for or against us? Presented to Lancaster Chapter of American Association for the Advancement of Science, Millersville College, Millersville, Pennsylvania, November 6, 1980.
- Velkley DE, Cunningham DE, Chung CK and Stryker JA: Review of Cs and Ra comparative dosimetry in gynecological implants. Presented at the Annual Meeting of Pennsylvania Radiological Society, Lancaster, Pennsylvania, May 16, 1981.
- Cunningham DE, Frey RA and Velkley DE: Microwave hyperthermia potentiates radiation in treatment of radioresistant tumor of human origin in the nude mouse. Presented at Microwave Power Symposium of International Microwave Power Institute, Toronto, Ontario, Canada, June 9-21, 1981.
- Velkley DE: Research and applications of physics in medicine at Pennsylvania State University Medical School. Presented at Department of Physics, Kent State University, Kent, Ohio, October 31, 1983.
- Velkley DE, Cunningham DE and Stryker JA: Irregular field planning in three dimensions. Presented at the Annual Meeting of AAPM, Chicago, Illinois, July 15-19, 1984.

### PENNSYLVANIA RADIATION PHYSICS ASSOCIATES, LTD.

# CONSULTANTS IN RADIATION PHYSICS P. O. BOX 164 HERSHEY, PA 17033

November 11, 2002

Lawrence F. Barone Farrell & Ricci, P.C. Attorneys and Counselors-at-Law 4423 North Front Street Harrisburg, PA 17110

Re: Barge v. Ying, et al.

Dear Mr. Barone:

I have reviewed the records that you forwarded to me regarding the treatment received by Amanda Barge at the Heritage Hills Oncology Center from May 24 to June 8, 1999. In particular I have focused on the testing and calibration of the Universal Treatmaster superficial therapy unit that was used in the treatment of Ms. Barge. This work was carried out by William Ying, Ph.D and begun on April 19, 1999. Calibration measurements continued even after the treatment of Ms. Barge was terminated.

In the initial measurements Dr. Ying carefully checked the parameters that were pertinent to the operation of this unit. These parameters included operating kilovoltage, accuracy of the treatment timer, and half-value-layers of the treatment beams. All of these critical parameters appeared to be within an acceptable range and did not suggest anything abnormal with the operation of the machine.

The final calibration measurements were delayed until the dosimetry system that was used to measure the output could be calibrated by the Accredited Dosimetry Calibration Laboratory. This was accomplished and the calibrations were completed on May 18, 2002. In my opinion all of these measurements, according to the records, were done accurately and in accordance with accepted protocols. The documentation and reports are appropriate and in accordance with accepted standards.

Following the original measurements, Dr. Ying next checked the output on June 11, 2002 at the request of Dr. Salinger and found the output at that time to be approximately four times the value of the first measurement. Dr. Ying then recommended that the treatment of Ms. Barge be

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stopped which did happen. Even though this discharged the responsibilities of Dr. Ying in this matter, he continued to monitor the output at several times through August 9, 2002 and displayed the results on a graph. This graph shows that the output was continually rising over this period which must be interpreted in terms of malfunction of the treatment unit. Two points marked by an x on the graph at May 24, 2002 and June 8, 2002 have been misinterpreted as measurements by one of the reviewers of this case but were in fact just points to represent the time interval for the treatment of Ms. Barge on the graph.

The familiarity of Dr. Ying with treatment protocols with this type of radiation beam is evident by his reasonable choices of f-factors and back-scatter-factors which are used to convert measured exposure in roentgens into dose in centiGray when calculating treatment times to set on the timer in order to deliver the treatment.

I believe that Dr. Ying met the standard of care and acted reasonably in his role related to this unfortunate case.

Donald E. Velkley, Ph.D., DABR, DABMP

Janald E. Velle

President

#### **CERTIFICATE OF SERVICE**

AND NOW, this 19th day of February, 2003, I, Joseph A. Ricci, Esquire, hereby certify that I served a true and correct copy of the foregoing *Pretrial Memorandum* upon all counsel of record by depositing a copy of same in the United States mail, regular delivery, postage prepaid at Harrisburg, Pennsylvania, addressed as follows:

Richard Oare, Esquire 1434 South George Street York, PA 17403

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Louis G. Close, III, Esquire 22 West Pennsylvania Avenue Suite 300 Towson, MD 21204

B. Craig Black, Esquire Robert A. McDermott, Esquire McKissock & Hoffman, P.C. 2040 Linglestown Road Suite 302 Harrisburg, PA 17110

Joseph A Ricci, Esquire